

Chapter 5 – 6 Review Sheet
Physical Science

Name _____
Test Thursday Oct. 21

Terms to match:

- | | |
|-----------------------------------|--------------|
| 1. Particles with positive charge | _____ |
| 2. Particles with negative charge | _____ |
| 3. Particles with no charge | _____ |
| 4. Number of protons | atomic _____ |
| 5. Sum of protons and electrons | atomic _____ |

Scientist and their theories:

- | | |
|--|-------|
| 1. Plum pudding, cathode rays | _____ |
| 2. Planetary model, electrons in orbiting motion | _____ |
| 3. 1 st experimental model, solid sphere atom | _____ |
| 4. Indivisible smallest particle of substance | _____ |
| 5. Discovered neutrons | _____ |
| 6. Gold foil, discovered nucleus | _____ |
| 7. Gives general location of electrons in orbitals | _____ |

Nuclear decay words:

- | | |
|---|-------|
| 1. Occurs when nucleus is split into smaller nuclei | _____ |
| 2. Process of joining nuclei into larger nucleus | _____ |
| 3. Consists of two protons and two neutrons | _____ |
| 4. No electrical charge, electromagnetic waves given off in radioactivity | _____ |
| 5. Consists of negative electrons | _____ |

Things to work out:

1. What is the number of neutrons in an element with atomic number of 6 and atomic mass of 14? _____
2. One atomic mass unit is 1/12 of the mass of _____.
3. Protons and _____ have about the same amount of mass.
4. The number of protons and _____ are usually the same in an atom, so they cancel out each other's charges.

Isotopic notation:

1. An atom for potassium (K) contains 19 protons, 19 electrons, and 20 neutrons. What is the atomic number? _____ What is its mass number? _____
2. The isotopic notation for this element is $\begin{smallmatrix} 33 \\ 16 \end{smallmatrix} \text{S}$. What is the atomic number? _____ What is the mass number? _____ How many neutrons are there? _____ How many electrons are there? _____

3. The isotopic notation is $^{238}_{92}\text{U}$. What is the atomic number? ____ What is the mass number? ____ What is the number of protons? ____ What is the number of electrons? ____ What is the number of neutrons? ____

Reading chemical formulas - Find the number of each type of atom in the following formulas:

1. In CuSO_4 , give the number of atoms of copper ____ and sulfur ____ and oxygen ____.
2. In NaHCO_3 , give the number of atoms of sodium ____ and hydrogen ____ and carbon ____ and oxygen ____.
3. Challenge! For $2\text{Al}_2\text{O}_3$, give the number of atoms of aluminum ____ and oxygen ____.
4. Challenge # For $\text{Ca}_5(\text{PO}_4)_3\text{OH}$, give the number of atoms of calcium ____ and Phosphorus ____ oxygen ____ and hydrogen _____. Be very careful about the oxygen!